

(Currently Amended) 1. A data-storage card comprising:

at least an optical data track for storing data accessible with an optical data accessing means wherein said optical data track is supported on an optical memory strip (OMS) as a cutoff piece attached to said data-storage card; and

said optical data track further having a plurality of arc segments formed as ~~spiral~~ cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves having a moving center rotating with continuously varying radius.

(Original) 2. The data-storage card of claim 1 further comprising:

at least a magnetic data track for storing data accessible with a magnetic data accessing means.

(Original) 3. The data-storage card of claim 1 further comprising:

a semiconductor chip for storing data accessible with a semiconductor data accessing means.

(Currently Amended) 4. The data-storage card of claim 1 wherein:

said ~~optical data track~~ arc segments further having a plurality of cutoff circular arc segments cutting off from a plurality of circles.

(Currently Amended) 5. The data-storage card of claim 1 wherein:

said optical data track further having a plurality of arc segments formed as cutoff spiral segments from a spiral formed with having a fixed center rotating with continuously varying radius.

(Canceled) 6. The data-storage card of claim 1 wherein:

said optical data track further having a plurality of arc segments formed as spiral segments having a moving center rotating with continuously varying radius.

(Currently Amended) 7. The data-storage card of claim 1 wherein:

said optical data track further having a plurality of arc segments formed as cutoff circle segments from concentric circles having a fixed center ~~of concentric circles~~.

(Currently Amended) 8. A data-storage system ~~card~~ comprising:

~~at least an optical data track for storing data accessible with an optical data pickup head for accessing data stored in an accessing means wherein said optical data track is supported on an optical memory strip (OMS) as a cutoff piece attached to said a data-storage card; and~~

said optical data track further having a plurality of arc segments formed as ~~circle~~ cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves ~~having a moving center rotating with constant radius.~~

(Original) 9. The data-storage card of claim 1 wherein:

said optical data track further having at least two arc segments of different lengths.

(Original) 10. The data-storage card of claim 1 wherein:

said optical data track further having a circular arc segment.

(Original) 11. The data-storage card of claim 1 wherein:

said optical data track further having a spiral arc segment.

(Currently Amended) 12. The data-storage card of claim 1 wherein:

said optical data track further having a plurality of arc segments formed as cutoff spiral segments from a spiral formed with a moving center rotating with continuously varying radius.

~~said optical data track further includes a linear data track segment.~~

(Original) 13. The data-storage card of claim 1 wherein:

said OMS further including a recording layer for disposing said data track wherein said recording layer having an area smaller than said OMS as said cutoff piece.

(Original) 14. The data-storage card of claim 1 wherein:

said OMS further having a protective layer with a trench for disposing a recording layer therein for containing said optical data track.

(Original) 15. The data-storage card of claim 1 wherein:

said OMS further having a protective layer with a trench for disposing a recording layer therein for containing said optical data track, and said OMS further having a reflective layer disposed below said recording layer in said trench.

(Original) 16. The data-storage card of claim 15 wherein:

said OMS further having a dye layer disposing in said trench below said recording layer.

- (Original) 17. The data-storage card of claim 15 wherein:  
  
said OMS further having a dielectric layer disposing in said trench.
- (Original) 18. The data-storage card of claim 15 wherein:  
  
said OMS further having a metal phase-change (PC) layer disposing in said trench.
- (Original) 19. The data-storage card of claim 1 wherein:  
  
said OMS further having a protective layer with a trench for disposing a recording layer therein for containing said optical data track; and  
  
said OMS further includes a focusing layer covering said protective layer and sealing said recording layer in said trench.
- (Original) 20. The data-storage card of claim 15 wherein:  
  
said OMS further includes a focusing layer covering said protective layer and sealing said recording layer and said reflective layer in said trench.
- (Original) 21. The data-storage card of claim 16 wherein:  
  
said OMS further includes a focusing layer covering said protective layer and sealing said recording layer, said dye layer and said reflective layer in said trench.
- (Original) 22. The data-storage card of claim 17 wherein:  
  
said OMS further includes a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said dielectric layer in said trench.

(Original) 23. The data-storage card of claim 18 wherein:

said OMS further includes a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said metal phase-change (PC) layer in said trench.

(Original) 24. The data-storage card of claim 1 wherein:

said OMS further having a protective layer with a trench for disposing a recording layer therein for containing said optical data track, and said OMS further having a heat activate bonding layer disposed below said protective layer.

(Currently Amended) 25. A data-storage system card comprising:

~~at least an optical data track for storing data accessible with an optical data pickup head for accessing data stored in an accessing means wherein said optical data track wherein said optical data track is supported on an optical memory strip (OMS) as a cutoff piece attached to said a data-storage card; and~~

said optical data track further having a plurality of arc segments formed as cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves;

said OMS further having a protective layer with a trench for disposing a recording layer therein for containing said optical data track; and

said OMS further having a heat-activated bonding layer disposed below said protective layer for bonding and attaching to said data storage card wherein said bonding of said OMS as said cutoff piece to said data storage card is between said heat-activated bonding layer activated with by applying heat, in a non-overlapping manner with respect to applying to said OMS on an area not overlapping with said recording layer, to said OMS.

(Currently Amended) 26. The data-storage system card of claim 25 further comprising:

an OMS placement area having a lower surface profile having an area slightly larger than said OMS for placing and attaching said OMS as a cutoff piece to said data-storage card.

(Currently Amended) 27. The data-storage system card of claim 25 further comprising:

an OMS placement area having a lower surface profile having an area slightly larger than said OMS for placing and attaching said OMS as a cutoff piece to said data-storage card whereby a top surface of said OMS is substantially at a same height as a top surface of said data-storage card.

(Currently Amended) 28. The data-storage system card of claim 26 wherein:

said OMS further having a bonding layer disposed as a bottom layer of said OMS for bonding to said OMS placement area to securely attach said OMS as a cutoff piece to said data-storage card.

(Currently Amended) 29. The data-storage system card of claim 28 wherein:

said bonding layer disposed as a bottom layer of said OMS is a heat-activated bonding layer for bonding to said OMS placement area by applying a heat to said OMS in a non-overlapping manner with respect to said ~~on an area not overlapping to~~ a recording layer disposed on said OMS whereby said recording layer is not applied with said heat.

(Currently Amended) 30. An optical memory strip (OMS) constituting a cutoff piece comprising:

at least an optical data track useful for storing data accessible with an optical data accessing means; and

said optical data track further having a plurality of arc segments formed as cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves ~~spiral segments having a moving center rotating with continuously varying radius.~~

(Original) 31. The OMS of claim 30 wherein:

said optical data track further having a plurality of circular arc segments.

(Currently Amended) 32. The OMS of claim 30 wherein:

said optical data track further having a plurality of arc segments formed as cutoff spiral segments cutting off from a spiral formed with ~~having~~ a fixed center rotating with continuously varying radius.

(Canceled) 33. The OMS of claim 30 wherein:

said optical data track further having a plurality of arc segments formed as spiral segments having a moving center rotating with continuously varying radius.

(Original) 34. The OMS of claim 30 wherein:

said optical data track further having at least two arc segments of different lengths.

(Original) 35. The OMS of claim 30 wherein:

said optical data track further having a circular arc segment.

(Original) 36. The OMS of claim 30 wherein:

said optical data track further having a spiral arc segment.

(Currently Amended) 37. The OMS of claim 30 wherein:

said optical data track further having a plurality of arc segments  
formed as cutoff spiral segments cutting off from a spiral with a  
moving center rotating with continuously varying radius.

~~said optical data track further includes a linear data track segment.~~

(Original) 38. The OMS of claim 30 further comprising:

a recording layer for disposing said data track wherein said  
recording layer having an area smaller than said OMS as said cutoff  
piece.

(Original) 39. The OMS of claim 30 further comprising:

a protective layer with a trench for disposing a recording layer  
therein for containing said optical data track.

(Original) 40. The OMS of claim 30 further comprising:

a protective layer with a trench for disposing a recording layer  
therein for containing said optical data track, and said OMS further  
having a reflective layer disposed below said recording layer in  
said trench.

(Original) 41. The OMS of claim 40 further comprising:

a dye layer disposing in said trench below said recording layer.



(Original) 42. The OMS of claim 40 further comprising:

a dielectric layer disposing in said trench.

(Original) 43. The OMS of claim 40 further comprising:

a metal phase-change (PC) layer disposing in said trench.

(Original) 44. The OMS of claim 30 further comprising:

a protective layer with a trench for disposing a recording layer therein for containing said optical data track; and

a focusing layer covering said protective layer and sealing said recording layer in said trench.

(Original) 45. The OMS of claim 40 further comprising:

a focusing layer covering said protective layer and sealing said recording layer and said reflective layer in said trench.

(Original) 46. The OMS of claim 41 further comprising:

a focusing layer covering said protective layer and sealing said recording layer, said dye layer and said reflective layer in said trench.

(Original) 47. The OMS of claim 40 further comprising:

a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said dielectric layer in said trench.

(Original) 48. The OMS of claim 43 further comprising:

a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said metal phase-change (PC) layer in said trench.

(Original) 49. The OMS of claim 30 further comprising:

a heat activate bonding layer disposed below said protective layer.

(Original) 50. The OMS of claim 30 further comprising:

a protective layer with a trench for disposing a recording layer therein for containing said optical data track; and

a layer disposed below said protective layer for bonding and attaching to a data storage card as a cutoff piece.

(Currently Amended)51. An optical memory strip (OMS) constituting a cutoff piece comprising:

at least an optical data track useful for storing data accessible with an optical data accessing means wherein said optical data track further having a plurality of arc segments formed as cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves;

a protective layer with a trench for disposing a recording layer therein for containing said optical data track;

a layer disposed below said protective layer for bonding and attaching to a data storage card as a cutoff piece; and

said bonding layer is a heat-activated layer wherein said OMS as said cutoff piece is bonded to said data storage card with a heat applying to said OMS in a non-overlapping manner with respect to ~~on an area not overlapping with~~ said recording layer.

(Currently Amended) 52. The OMS of claim 30 wherein:

said optical data track further having a plurality of arc segments formed as cutoff circle segments cutting off from multiple concentric circles having a fixed center ~~of concentric circles~~.

(Currently Amended) 53. An optical memory strip (OMS) constituting a cutoff piece comprising:

at least an optical data track useful for storing data accessible with an optical data pickup head ~~accessing means~~; and

said optical data track further having a plurality of arc segments formed as cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves ~~circle segments having a moving center rotating with constant radius~~.

(Currently Amended) 54. A method to form an optical memory strip (OMS) useful for implementing as a cutoff piece comprising:

forming said OMS on a disc with at least an optical data track for storing data accessible with an optical data accessing means; and

forming said optical data track as a plurality of cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves ~~spiral arc segments having a moving center rotating with continuously varying radius~~.

(Original) 55. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a plurality of circular arc segments.

(Currently Amended) 56. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a plurality of arc segments ~~formed~~ as cutoff spiral segments by cutting from a spiral with ~~having~~ a fixed center rotating with continuously varying radius.

(Canceled) 57. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a plurality of arc segments formed as spiral segments having a moving center rotating with continuously varying radius.

(Original) 58. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming at least two arc segments of different lengths.

(Original) 59. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a circular arc segment.

(Original) 60. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a spiral arc segment.

(Currently Amended) 61. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a plurality of arc segments ~~formed~~ as cutoff spiral segments cutting off from a spiral with ~~having~~ a moving center rotating with continuously varying radius.

~~said step of forming said optical data track further including a step of forming a linear data track segment.~~

(Original) 62. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a recording layer having an area smaller than said OMS for disposing said data track.

(Original) 63. The method of claim 62 wherein:

said step of forming said optical data track further including a step of forming protective layer with a trench for disposing said recording layer therein for containing said optical data track.

(Original) 64. The method of claim 62 wherein:

said step of forming said optical data track further including a step of forming protective layer with a trench for disposing said recording layer therein for containing said optical data track and disposing a reflective layer below said recording layer in said trench.

(Original) 65. The method of claim 62 wherein:

said step of forming said optical data track further including a step of forming protective layer with a trench for disposing said recording layer therein for containing said optical data track and disposing a dye layer in said trench below said recording layer.

(Original) 66. The method of claim 63 further comprising:

disposing a dielectric layer in said trench.

- (Original) 67. The method of claim 63 further comprising:  
  
disposing a metal phase-change (PC) layer in said trench.
- (Original) 68. The method of claim 62 wherein:  
  
said step of forming said optical data track further including a step of forming a protective layer with a trench for disposing said recording layer therein for containing said optical data track; and  
  
the method further includes a step of disposing a focusing layer for covering said protective layer and sealing said recording layer in said trench.
- (Original) 69. The method of claim 63 further comprising:  
  
disposing a focusing layer covering said protective layer and sealing said recording layer and said reflective layer in said trench.
- (Original) 70. The method of claim 64 further comprising:  
  
disposing a focusing layer covering said protective layer and sealing said recording layer, said dye layer and said reflective layer in said trench.
- (Original) 71. The method of claim 65 further comprising:  
  
disposing a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said dielectric layer in said trench.
- (Original) 72. The method of claim 66 further comprising:  
  
disposing a focusing layer covering said protective layer and sealing said recording layer, said reflective layer and said metal phase-change (PC) layer in said trench.

(Currently Amended) 73. A method to form an optical memory strip (OMS) useful for implementing as a cutoff piece comprising:

forming said OMS on a disc with at least an optical data track disposed on a recording layer on said OMS for storing data accessible with an optical pickup head ~~data accessing means~~;

forming said optical data track as a plurality of cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves;

forming a protective layer with a trench for disposing said recording layer therein for containing said optical data track; and

disposing a heat activate bonding layer below said protective layer.

(Original) 74. The method of claim 54 further comprising:

disposing a protective layer with a trench for disposing a recording layer therein for containing said optical data track;

disposing a bonding layer below said protective layer; and

cutting off said OMS from said disc and bonding and attaching said OMS to a data storage card as a cutoff piece.

(Original) 75. The method of claim 74 wherein:

said step of disposing said bonding layer is a step of disposing a heat-activated bonding layer.

(Original) 76. The method of claim 75 wherein:

said step of bonding and attaching said OMS to said data storage card is a step of applying a heat to said OMS on an area not overlapping with a recording layer for containing said data track.

(Original) 77. The method of claim 54 wherein:

said step of forming said optical data track further including a step of forming a plurality of arc segments formed as circle segments having a fixed center of concentric circles.

(Currently Amended) 78. A method to form an optical memory strip (OMS) useful for implementing as a cutoff piece comprising:

forming said OMS on a disc with at least an optical data track for storing data accessible with an optical data accessing means; ~~and~~

forming said optical data track as a plurality of cutoff circumferential segments from multiple substantially circular curves wherein said cutoff piece having a width shorter than diameters of said substantially circular curves; and

said step of forming said optical data track further including a step of forming plurality of arc segments formed as circle segments having a moving center rotating with constant radius.